

Rat TNF alpha ELISA Kit ab46070

★★★★★ [1 Abreviews](#) [96 References](#) [3 Images](#)

Overview

Product name Rat TNF alpha ELISA Kit

Detection method Colorimetric

Precision

Intra-assay

Sample	n	Mean	SD	CV%
A	12	543.5pg/ml	44.7	8.2%
B	10	130.1pg/ml	10.3	7.9%

Inter-assay

Sample	n	Mean	SD	CV%
A	9	541.4pg/ml	33.2	6.1%
B	9	149.4pg/ml	9.8	6.5%

Sample type Cell culture supernatant, Serum

Assay type Sandwich (quantitative)

Sensitivity < 15 pg/ml

Range 31.25 pg/ml - 1000 pg/ml

Assay time 3h 45m

Assay duration Multiple steps standard assay

Species reactivity **Reacts with:** Rat

Product overview

Abcam's TNF alpha Rat *in vitro* ELISA (Enzyme-Linked Immunosorbent Assay) kit is designed for the quantitative measurement of Rat TNF alpha in cell culture supernatants, serum and plasma samples.

A monoclonal antibody specific for TNF alpha has been coated onto the wells of the microtiter strips provided. Samples, including standards of known TNF alpha concentrations, control specimens or unknowns are pipetted into these wells. During the first incubation, the standards or samples and a biotinylated monoclonal antibody specific for TNF alpha are simultaneously incubated. After washing, the enzyme Streptavidin-HRP, that binds the biotinylated antibody is

added, incubated and washed. A TMB substrate solution is added which acts on the bound enzyme to induce a colored reaction product. The intensity of this colored product is directly proportional to the concentration of TNF alpha present in the samples.

This kit will recognize both endogenous and recombinant rat TNF alpha

Platform

Microplate

Properties

Storage instructions

Store at +4°C. Please refer to protocols.

Components	Identifier	2 x 96 tests	1 x 96 tests	1 x 96 tests
10X Standard Diluent Buffer	Black	1 x 25ml	1 x 15ml	1 x 15ml
200X Wash Buffer	White	2 x 10ml	1 x 10ml	1 x 10ml
Biotinylated Antibody Diluent	Red	1 x 13ml	1 x 7.5ml	1 x 7.5ml
Biotinylated anti-TNF alpha	Red	2 x 400µl	1 x 400µl	1 x 400µl
Chromogen TMB Substrate Solution		1 x 24ml	1 x 11ml	1 x 11ml
HRP Diluent	Red	1 x 23ml	1 x 12ml	1 x 12ml
Plastic Plate Covers		4 units	2 units	2 units
Stop Reagent	Black	2 x 11ml	1 x 11ml	1 x 11ml
Streptavidin-HRP		4 x 5µl	2 x 5µl	2 x 5µl
TNF alpha Microplate (12 x 8 well strips)		2 units	1 unit	1 unit
TNF alpha Standard (Lyophilized)	Yellow	4 vials	2 vials	2 vials

Function

Cytokine that binds to TNFRSF1A/TNFR1 and TNFRSF1B/TNFR2. It is mainly secreted by macrophages and can induce cell death of certain tumor cell lines. It is potent pyrogen causing fever by direct action or by stimulation of interleukin-1 secretion and is implicated in the induction of cachexia, Under certain conditions it can stimulate cell proliferation and induce cell differentiation.

Involvement in disease

Genetic variations in TNF are a cause of susceptibility psoriatic arthritis (PSORAS) [MIM:607507]. PSORAS is an inflammatory, seronegative arthritis associated with psoriasis. It is a heterogeneous disorder ranging from a mild, non-destructive disease to a severe, progressive, erosive arthropathy. Five types of psoriatic arthritis have been defined: asymmetrical oligoarthritis characterized by primary involvement of the small joints of the fingers or toes; asymmetrical arthritis which involves the joints of the extremities; symmetrical polyarthritis characterized by a rheumatoidlike pattern that can involve hands, wrists, ankles, and feet; arthritis mutilans, which is a rare but deforming and destructive condition; arthritis of the sacroiliac joints and spine (psoriatic spondylitis).

Sequence similarities

Belongs to the tumor necrosis factor family.

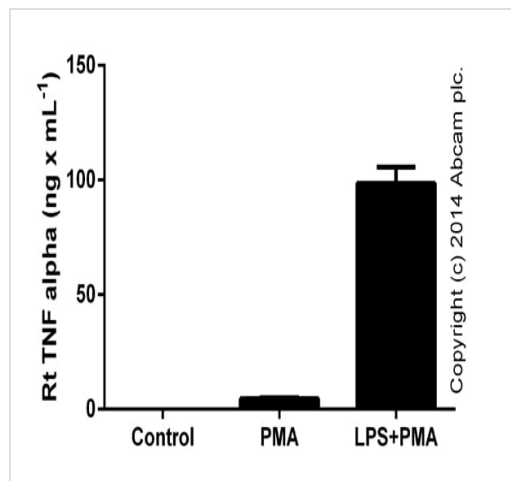
Post-translational modifications

The soluble form derives from the membrane form by proteolytic processing. The membrane form, but not the soluble form, is phosphorylated on serine residues. Dephosphorylation of the membrane form occurs by binding to soluble TNFRSF1A/TNFR1. O-glycosylated; glycans contain galactose, N-acetylgalactosamine and N-acetylneuraminic acid.

Cellular localization

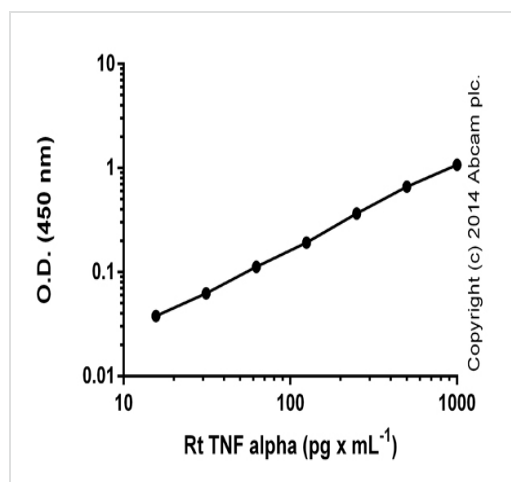
Secreted and Cell membrane.

Images



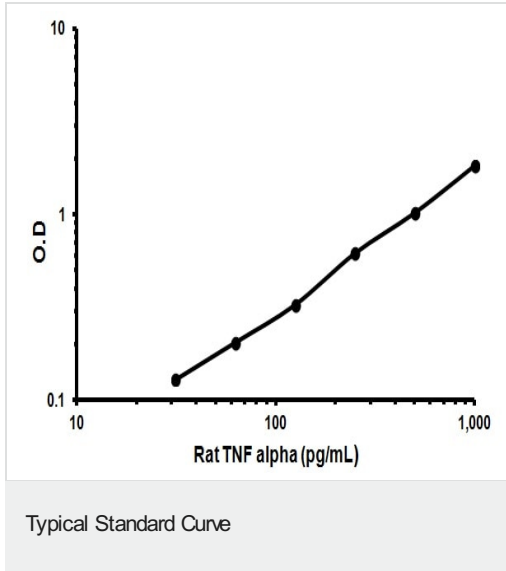
Rat TNF alpha measured in culture supernatants (dilution range 1/1-1/200) from control NR8383 cells or cells stimulated for 24 hours with 50 ng x mL⁻¹ of PMA ((PMA) [ab120297](#)) or PMA with the addition of 1 ug x mL⁻¹ of LPS (Sigma) (LPS+PMA) for the last 6 hours (duplicates +/- SD).

ELISA: TNF alpha Rat ELISA Kit (ab46070)



Standard curve with background signal subtracted (duplicates; +/- SD).

ELISA: TNF alpha Rat ELISA Kit (ab46070)



Representative Standard Curve using ab46070

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